Christian Vogler, Ph.D.
Associate Professor
Director, Technology Access Program (TAP)
Co-Principal Investigator, RERC on Telecommunications Access
Gallaudet University
800 Florida Ave NE
Washington, DC 20002
202.250.2795

February 15, 2012

VIA ELECTRONIC FILING
Ms. Marlene H. Dortch, Secretary
Federal Communications Commission
445 12th Street, S.W.
Washington, DC 20554

Re: Notice of Ex Parte Meeting,
Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities; Structure and Practices of the Video Relay Services Program
CG Docket Nos. 03-123 and 10-51.

Dear Ms. Dortch:

On February 13, 2012, Christian Vogler and Norman Williams from the Technology Access Program at Gallaudet University (TAP), Janet Bailey (RID), Sean Belanger and Jeff Rosen (ZVRS), Robin Horwitz, David Bahar, Jewel Javregni and Phil Marchesiello (Convo), Nancy Bloch and Tom Kielty (SnapVRS), Kelby Brick (Purple), Andrew Phillips and Shane Feldman (NAD), Sharon Hayes (VRSCA), Claude Stout and Jim House (TDI), Tamar Finn (Bingham), Angela Roth (ASL Holdings/Gracias VRS), Everett Pucket (CAAG), Paul Kershishnik and Mike Maddix (Sorenson), and John Nakahata (Wiltshire Grannis), met at the VRS Roundtable with Greg Hlibok, Richard Hovey, Eliot Greenwald, Bob Aldrich, and Karen Peltz Strauss of the Consumer and Governmental Affairs Bureau, Paul de Sa and Nicholas Alexander of the Office of Strategic Planning, and Henning Schulzrinne, Chief Technical Officer, to discuss the Video Relay Service (VRS) Further Notice of Proposed Rulemaking ("FNPRM") released on December 15, 2011.

On the topic of the per-user compensation proposal floated in the FNPRM, TAP expressed strong concerns about the technical implications of VRS users getting locked into a single provider. Being locked into a single VRS provider is not at all comparable to being locked in to a single mobile phone service provider. Mobile phone service providers control their infrastructure and their network, and thus are in a position to make guarantees about the technical quality of service (QoS) of their

calls, and the ability to connect calls to other parties, including the ability to connect to 9-1-1. VRS providers, in contrast have to rely on the open Internet to provide their service, with no guarantees about the QoS between the caller endpoint and the VRS endpoint. If anything goes wrong on the network path between the VRS and the caller (e.g., network congestion, routing failures, port blocking), the VRS providers are at the mercy of the intervening parties that control each segment of the network path; this is not something that the VRS providers will be able to compete on or fix on their own, in order to maintain minimum service standards. As long as this situation persists and QoS is not supported end-to-end on the open Internet between callers and the VRS providers, with involvement from all intervening parties, situations will arise where users are forced to switch to a different VRS app and call a different VRS provider, in order to get a video connection that meets the minimum quality requirements for a sign language conversation.

TAP brought up several concrete examples of such problems. First, network congestion led to unusable video between the caller and VRS provider A. Switching equipment would not have helped, because the problem was with the network path between the caller and the VRS provider A. Moreover, dialing around to another provider with the same VRS app would not have helped, because the VRS app in question registers with the SIP server of the specific VRS provider A, which also was affected by the network problems. The only solution was to disconnect, close the VRS app A, and dial another VRS provider B with its own VRS app B, where at that time there were no problems with the network path between the caller and VRS provider B.

Second, TAP brought up a specific example of a wireless broadband provider blocking SIP port 5060, which made calling via SIP-based VRS services impossible altogether. While there are some workarounds, such as VRS providers offering alternate ports, this is a type of problem that can be solved reliably only by the broadband provider, which is outside of the VRS companies' control; this is also a stark reminder of how VRS providers are not comparable to mobile telephone providers – if the latter were faced with a situation where calls originated on its network failed to connect, they would be able to do everything in their power to resolve the issue on their networks. VRS providers are unable to do so, because they do not control the network.

TAP clarified that technical problems affecting video quality can arise in many ways, and can be due to the caller's equipment, the caller's network router, the caller's ISP, and the network backbone operators, among others. The key point is that some of these technical problems are beyond the control of both the caller and the VRS provider. It was suggested by the FCC that as a remedy VRS providers should offer many modalities to reach them, such as SIP-based videophones, apps, mainstream VoIP services like Skype, and so on. However, these remedies still will not help if the problem lies with the network path between the caller and the VRS provider.

TAP expressed its enthusiasm about the proposal in the FNPRM to standardize on SIP for interoperability in the VRS ecosystem. TAP pointed out that this was an opportunity to ensure that VRS will be compatible with next-generation 9-1-1 (NG-9-1-1). To this end the future VRS interoperability standard must track the NENA Technical Standard Document 08-003, Detailed Functional and Interface Standards for the NENA i3 Solution (NENA i3), and also track future developments with respect to NENA i3. Furthermore, the Emergency Access Advisory Committee (EAAC) released its report and recommendations in December 2011, which also impact relay services, including a recommendation for a pool of interpreters trained in handling emergency calls. TAP mentioned that EAAC is setting up several working groups to follow up, among them a group to identify gaps and issues in NENA i3 with respect to the EAAC recommendations, and another one to identify problems with the way relay services currently handle 9-1-1 calls and to propose improvements. The VRS industry will need to follow the activities of these groups closely.

With respect to improvements in 9-1-1 call handling, TAP mentioned that call routing delays to the PSAP currently are at unacceptable levels. Testing and real user experience have shown that these delays can range between 4 to 10 minutes, even today, and have not substantially improved since 2006. Moreover, mobile VRS apps need a way to pass the phone's GPS location via standard SIP-based mechanisms to the provider, and these have to be used by the VRS in order to route 9-1-1 calls automatically to the correct PSAP, overriding any privacy-related blocks that may currently exist.

TAP also expressed its appreciation of efforts to make VRS compatible with mainstream equipment. One potential stumbling block consists of passing voice numbers of hearing parties to the VRS provider during the call setup.

TAP appreciates the opportunity to participate in the roundtable discussion with stakeholders and staff from the FCC. We are excited about the potential of the video relay service system, but remain concerned that the available technology and mode of operation of the Internet at large is not suitable for a per-user compensation model.

Respectfully submitted,

/s/ Christian Vogler[1]
Director, Technology Access Program
Co-Principal Investigator, RERC on Telecommunications Access
Gallaudet University

/s/ Norman Williams
Senior Research Engineer, Technology Access Program
Gallaudet University

February 15, 2012

Cc (by e-mail):
Karen Peltz Strauss
Gregory Hlibok
Eliot Greenwald
Bob Aldrich
Richard Hovey
Paul de Sa
Nicholas Alexander
Henning Schulzrinne

[1] The contents of these comments were developed with funding from the National Institute on Disability and Rehabilitation Research, U.S. Department of Education, grant number H133E090001 (RERC on Telecommunications Access). However, those contents do not necessarily represent the policy of the Department of Education, and you should not assume endorsement by the Federal Government.